

Automatic program generation apparatus

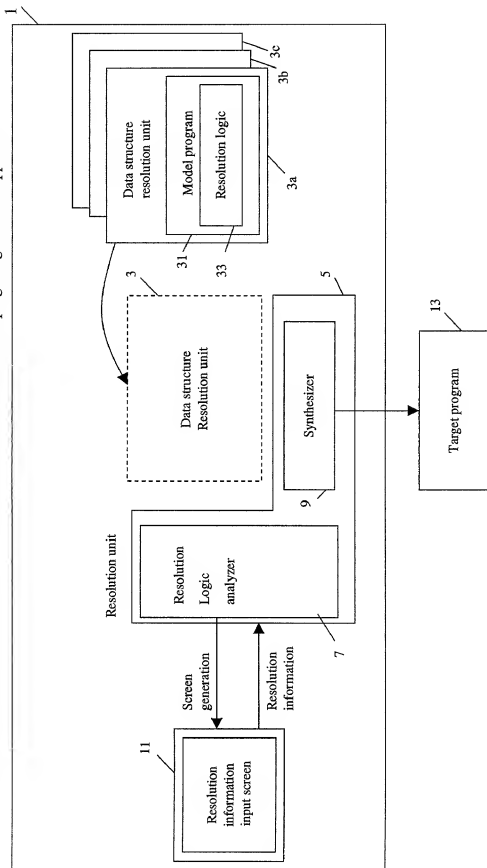


Fig.1

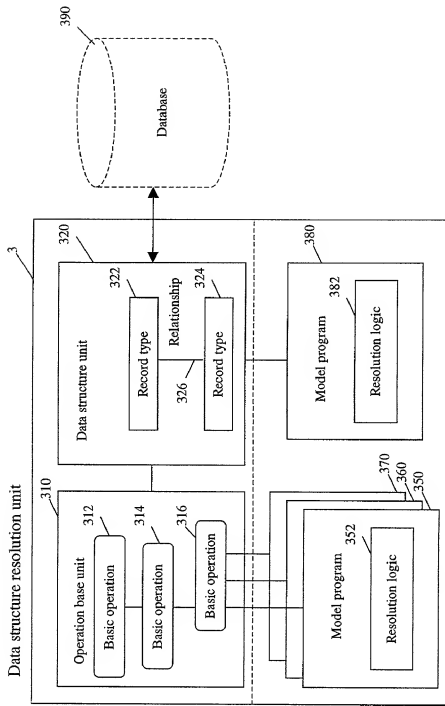


Fig.2

15

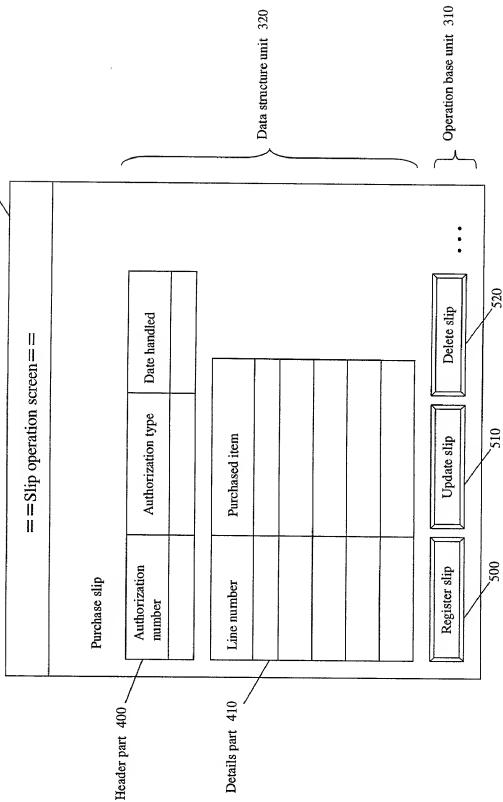


Fig.3

Header part 400

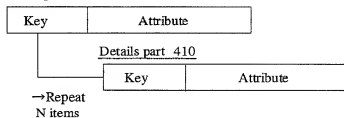


Fig.4

	Header part	Details part
Register slip	Register	Register
Update slip	Update	Update
Add detail	—	Register
.

Fig.5

Model program for slip update

```
public void <Operation name>(<Slip name>Msg entityInfo)
throws UserException {
    if(<Updateable state name>){
        mapFrom(entityInfo); //Update of attribute
        setState(<State name after update>);//Setting of state
        <Inherent check>
    }else{
        throw new CAAUserException(<Error Message>);
    }
}
```

Fig.6

== Slip type resolution information input screen ==

[Data structure resolution part]

Header part

No	Item name	Key	Type
01	Authorization number	O	int
02	Authorization type		String
03	Date handled		date
04	...		

Details part

No	Item name	Key	Type
01	Authorization number	O	int
02	Line number		int
03	Purchased item		String
04	...		

[Operation resolution part]

Operation name

{Authorization
by section
manager}

Update Slip

Logic resolution information

Updateable state name

State name after update

Error message

Inherent check

["Authorization being requested"]

["Section manager has authorized"]

["This cannot be authorized"]

{Authorization type--"Division manager
settlement slip"}

{Create slip}

Register slip

Fig.7

== Type selection screen ==

Simple type	Plan type
Slip type	Seat reservation type
Hierarchy type	Composition type
Tree type	Slip (detail-led) type
Stock type	Pedigree type
Time band reservation type	Matrix type

Return Next Cancel

11b

Fig.8

== First slip type resolution information input screen ==

Slip name :

Return Next Cancel

11c

Fig.9

==
Second slip type resolution information input screen
==

【Data structure resolution part】

Header part

No	Item name	Key	Type
01	Authorization number	○	int
02	Authorization type		String
03	Date handled		date
04	...		

Details part

No	Item name	Key	Type
01	Authorization number	○	int
02	Line number	○	int
03	Purchased item		String
04	...		

Return

Next

Cancel

Fig.10

==Third slip type resolution information input screen==

Operation name: Authorization by section manager

Corresponding basic operation name: Update slip ▼

Register slip

Update slip

Delete slip

Cancel

11e

Fig.11

==Fourth slip type resolution information input screen==

《Operation resolution part》

Updateable state name: Authorization being requested

State name after update: Request for authorization has made

Error message: "This cannot be authorized"

Inherent check: Authorization type="Division manager settlement slip"

Return Generate Cancel

11f

Fig.12

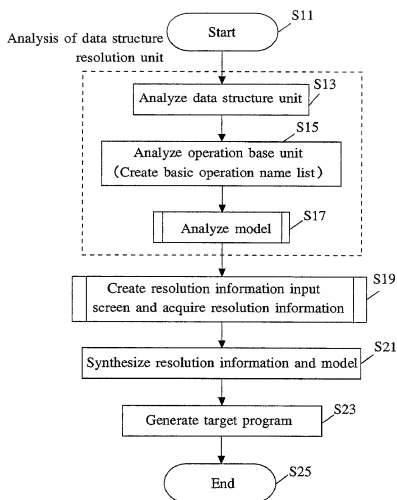


Fig.13

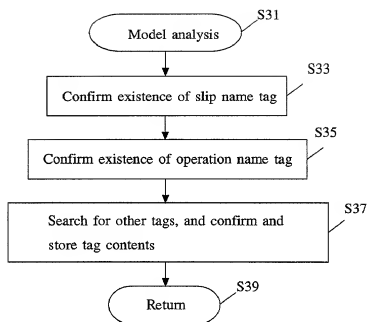


Fig.14

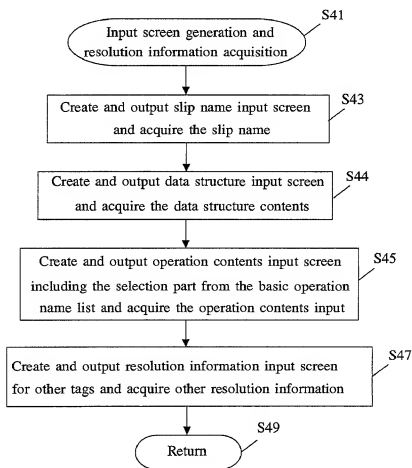


Fig.15

== Slip type resolution information input screen ==

【Data structure resolution part】

Header part

No	Item name	Key	Type
01	Shipping number	O	int
02	Shipping type		String
03	Date handled		date
04	...		

Details part

No	Item name	Key	Type
01	Shipping number	O	int
02	Line number	O	int
03	Product code		String
04	...		

【Operation resolution part】

Operation name

[Shipping settlement]

Update slip

Logic resolution information

Updateable state name

State name after update

Error message

Inherent check

Register slip

[Shipping request]

Fig.16

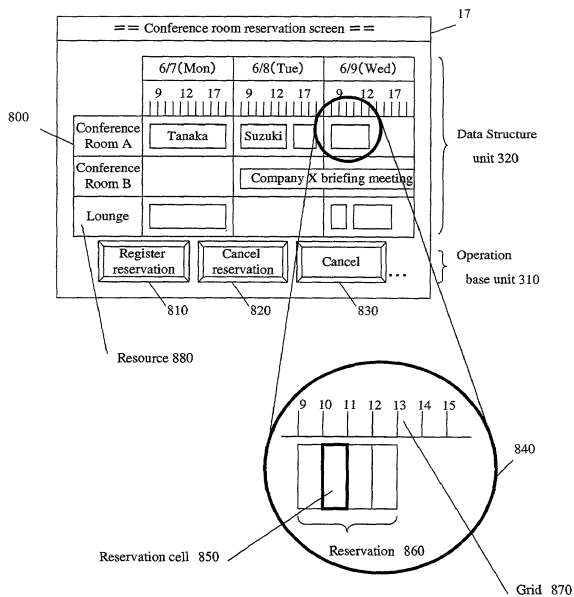


Fig.17

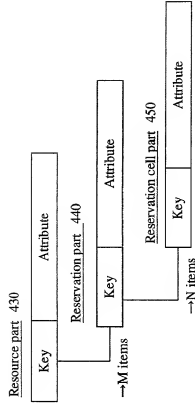


Fig.18

Resource part	Reservation part	Reservation cell part
Register reservation	Register	Register
Cancel reservation	Delete	Delete
Confirm vacant status	-	-
Change reserved period	-	Delete/Register
Change reserved resource	Search	Delete/Register
Search by reservation condition	-	-
...

Fig.19

== Resolution information input screen ==

920

910

900

[Data structure resolution part]

Resource part

No	Item name	Key	Type
01	Conference room code	O	String
02	Conference room name		String
03	Capacity		int
04	TV conference possible		boolean
05	...		

Reservation part

No	Item name	Key	Type
01	Reservation number	O	int
02	Conference room code		String
03	Start date		Date
04	Start grid No		int
05	...		

System constants

Maximum grid number	21
Grid unit name	"Time"
...	

930

[Operation resolution part]

Operation name

[Reserve conference room]

Register reservation

Logic resolution information

Check of the possible reservation date

{Work day check(Reservation date) = "OK"}

Error message

{"The reservation can not be made"}

Inherent check

{Check position(Position code) = "OK"}

Logic resolution information

Treatment when change is not possible

{Remain original reservation}

Fig.20

Key	Attribute
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Fig.21

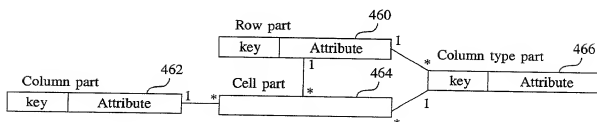


Fig.22

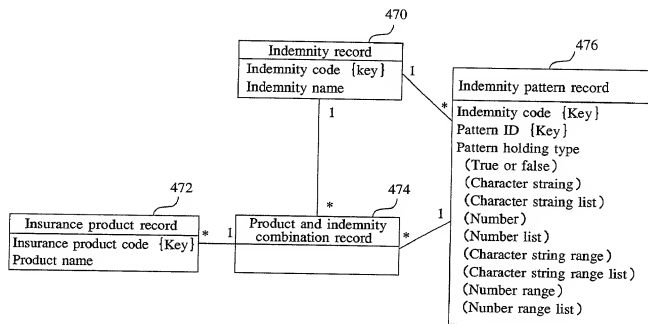


Fig.24

Insurance Product indemnity	Use and model	Special non-discharge agreement by age	Special family bike contract	Uninsured party injury insurance
A	<ul style="list-style-type: none"> • Ordinary private vehicle • Small private vehicle • Light private vehicle • Two-wheeled vehicle • Motorized bicycle 	<ul style="list-style-type: none"> • 21 years • 26 years • 30 years • Age irrelevant 	Yes	Yes
	<ul style="list-style-type: none"> • Ordinary private vehicle • Small private vehicle • Light private vehicle 	<ul style="list-style-type: none"> • 21 years • 26 years • 30 years • Age irrelevant 	Yes	Yes
C	<ul style="list-style-type: none"> • Ordinary private vehicle • Small private vehicle • Light private vehicle 	<ul style="list-style-type: none"> • 21 years • 26 years • 30 years • Age irrelevant 	Yes	Yes
	<ul style="list-style-type: none"> • Ordinary private vehicle • Small private vehicle • Light private vehicle 	<ul style="list-style-type: none"> • 21 years • 26 years • 30 years • Age irrelevant 	No	No
E	<ul style="list-style-type: none"> • Ordinary private vehicle • Small private vehicle • Light private vehicle • Two-wheeled vehicle • Motorized bicycle 	<ul style="list-style-type: none"> • 50 years 	No	No

Fig.23

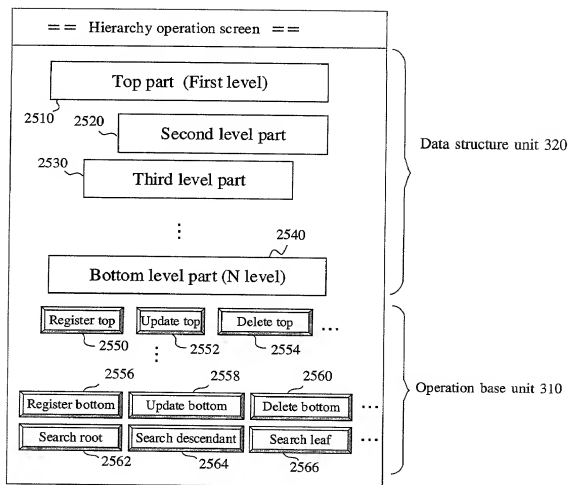


Fig.25

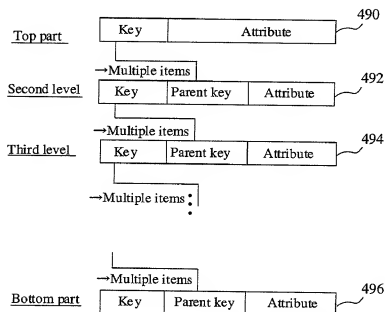


Fig.26

== Hierarchy type structure resolution information ==

【Data structure resolution part】

2700

2710

2720

Top part

No	Item name	Key	Type
01	Business division code	O	int
02	Business division name		String
03	Business division manager		String
04	...		

Middle level part

No	Item name	Key	Type
01	Division code	O	int
02	Division name		String
03	Business division code		int
04	...		

Bottom part

No	Item name	Key	Type
01	Section code	O	int
02	Section name		String
03	Division code		int
04	...		

【Operation resolution part】

2730

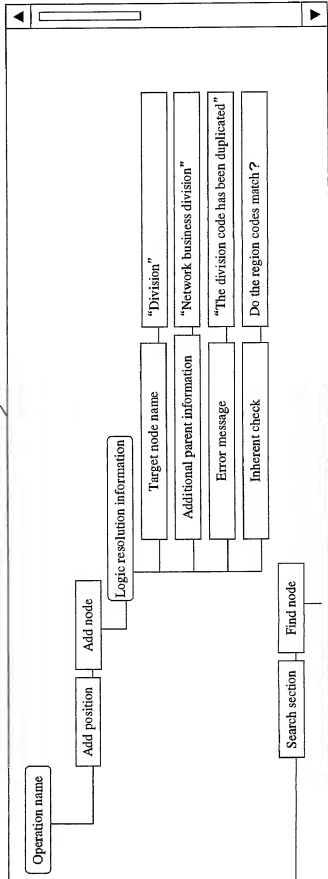


Fig.27

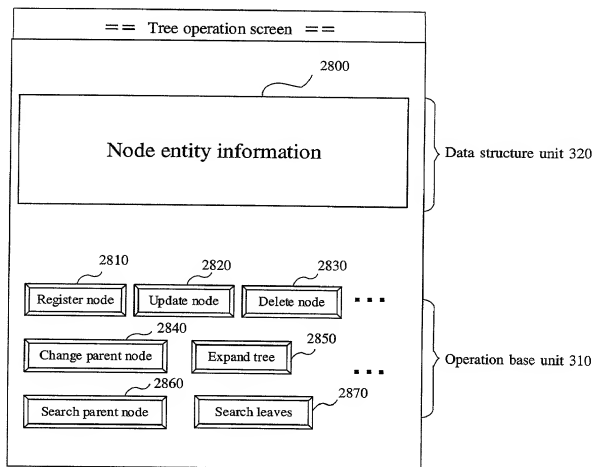


Fig.28

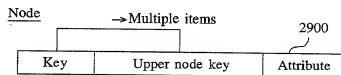


Fig.29

== Tree type structure resolution information input screen ==

【Data structure resolution part】

Node part			
No	Item name	Key	Type
01	Office organization code	O	int
02	Office organization name		String
03	Upper office organization code		int
04	...		

300

【Operation resolution part】

Operation name

Change office organization

Change node

Logic resolution information

Target node name

Additional parent information

Error message

Inherent check

"Division"

"Network business division"

"The office organization code has been duplicated"

Are there any employees?

Search office organization

Find node

3010

Fig.30

Fig.31a

Sales slip		
Sale number	Date order issued	Client name
101	2/14/00	Merchant A
		Total
		22000

Fig.31b

Invoice slip		
Invoice number	Invoice date	Invoiced to
201	2/29/00	Merchant A
		Total
		17000

Fig.31c

Receipt slip		
Receipt number	Invoice date	Invoiced to
301	2/29/00	Merchant A
		Total
		17000

Fig.31d

Transaction details				
Detail number	Product	Quantity	Unit price	Price
1001	Ball point pen	100	100	10000
1002	Correction fluid	10	200	2000
1003	Pencil	100	50	5000
1004	Eraser	50	100	5000

Fig.32

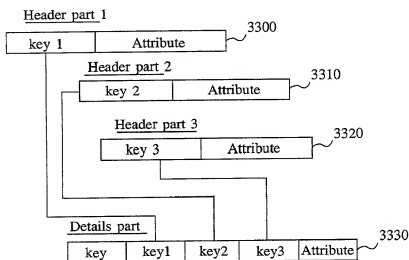


Fig.33

== Detail-led slip type structure resolution information input screen ==

【Data structure resolution part】

3400

3410

3420

Header 1

No	Item name	Key	Type
01	Sales number	<input type="radio"/>	int
02	Date order received		String
03	Customer name		String
04	Total		int

Header 2

No	Item name	Key	Type
01	Invoice number	<input type="radio"/>	int
02	Invoice date		String
03	Invoked to		String
04	Total		int

Details part

No	Item name	Key	Type
01	Transaction number	<input type="radio"/>	int
02	Product		String
03	Quantity		String
04	Unit price		int

【Operation resolution part】

3430

Operation name

Register sales slip

Register slip

Logic resolution information

Target node name

Target header additional information

Error message

Inherent check

Issue invoice

Switch header

"Sale"

"Customer name"

"We do not handle this product"

Has the customer's limit been exceeded?

Fig.34

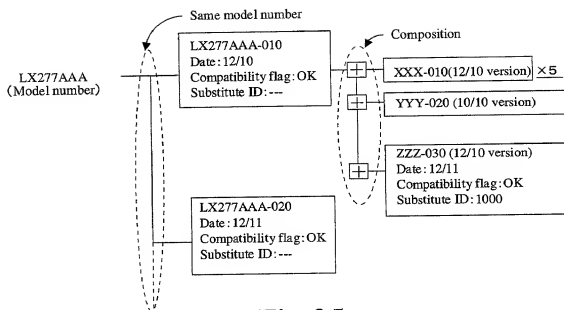


Fig.35

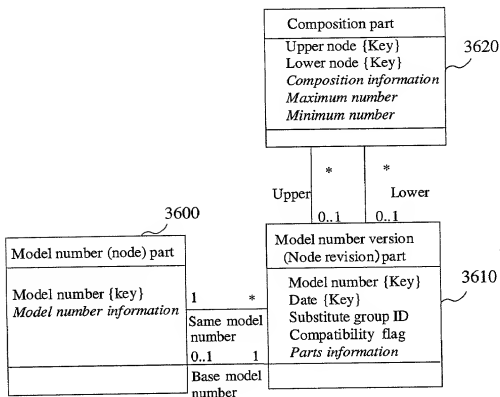


Fig.36

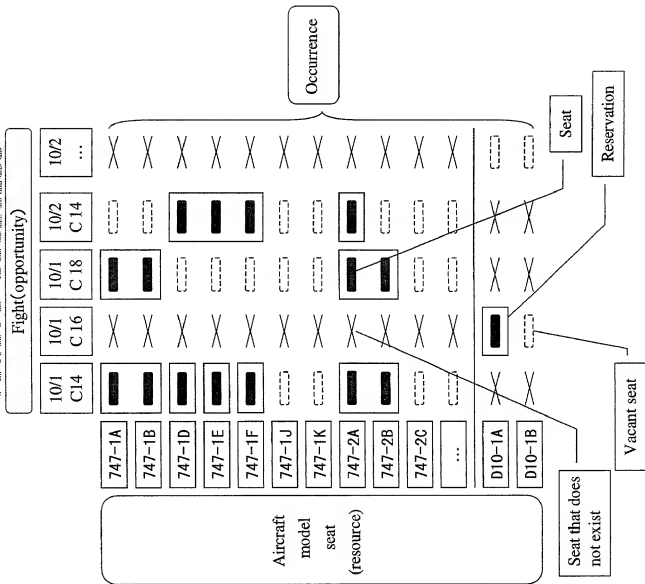


Fig.37

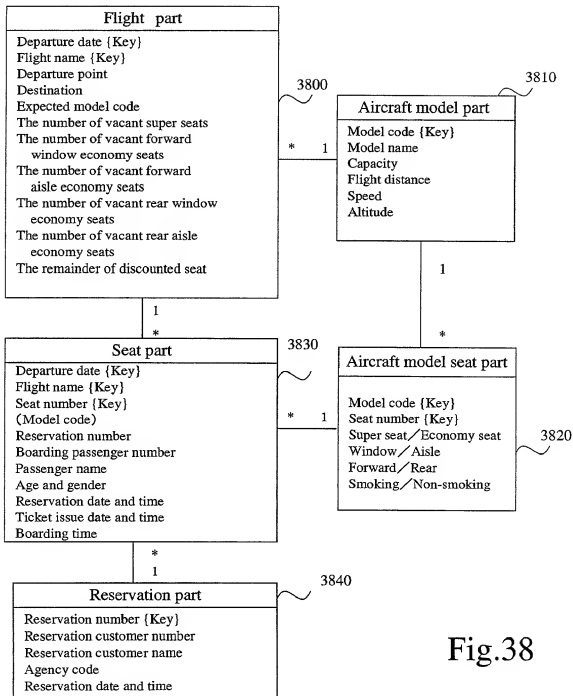


Fig.38

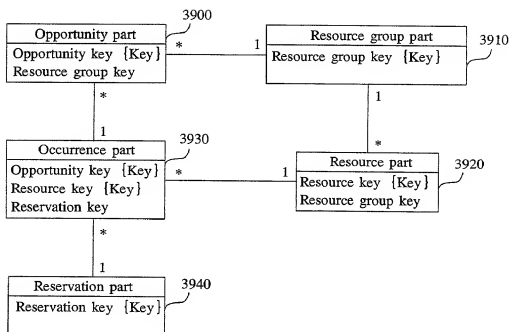


Fig.39

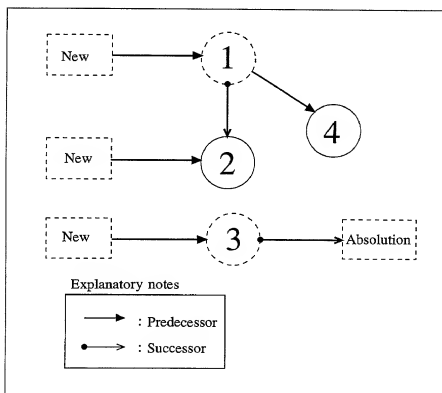


Fig.40

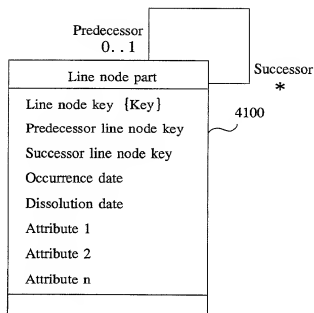


Fig.41

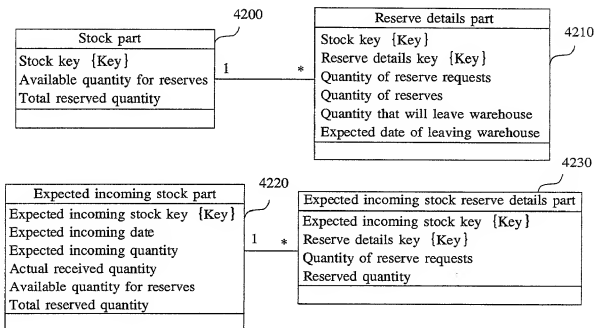


Fig.42

Product (X-axis)	Organization (Y-axis)	Time (T-axis)		
		Business year	Month	Daily
Product type	Headquarters	○	—	—
	Business division	○	○	—
	Section	—	—	—
Model	Headquarters	—	—	—
	Business division	○	○	—
	Section	○	○	—
Product	Headquarters	—	—	—
	Business division	—	○	—
	Section	○	○	○

Fig.43

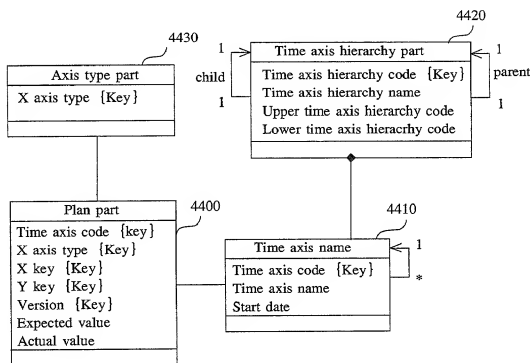


Fig.44